REMARKS

Reconsideration and allowance of the present application are respectfully requested.

The Non-final Office Action dated December 27, 2005 has been carefully reviewed, and these remarks are responsive thereto.

Claims 1-10 and 12-18 are pending after entry of this amendment.

Applicants note with appreciation the Examiner's indication that claims 12 and 13 would be allowable if rewritten in independent form. Applicants amend claims 12 and 13 herein to incorporate base claims 1 and 11 and cancel claim 11. Independent claims 1, 14, 15, and 16 are amended to more clearly state the claimed invention. Claim 8 is amended to correct a minor typographical error. New claim 18 is added. No new matter has been added by these amendments to the claims.

Claims 1-17[1] were objected to because the terms "IS-OFDM" and "IDFT" are used in abbreviated form the first time they appear in the claims. Claims 1, 14, 15, and 16 have been amended to provide the full term for "IS-OFDM" at its first occurrence. Claim 12 has been amended to provide the full term for "IDFT" at its first occurrence. In addition, claim 13 has been amended to provide the full term for "DFT" at its first occurrence. Withdrawal of the objection to the claims is requested.

[1] Although the Office Action at page 2 refers to Claims 1-22 as being objected to, at the time of examination, the instant application contained only claims 1-17, as indicated on page 1 of the Office Action, and only claims 1-17 are dealt with in the remainder of the Office Action.

Claims 1-11, 16, and 17

Claims 1-11, 16, and 17 are rejected under 35 U.S.C. § 103(a)as being unpatentable over Li et al. (US 6904283) ("Li") in view of Tong et al. (US 6804521) ("Tong"). This rejection is respectfully traversed.

It is respectfully submitted that there would be no motivation to combine Li with Tong, and that, even if combined, the combination of Li and Tong does not teach or suggest all features of the present invention.

Claim 1 recites an interference-suppressing orthogonal frequency division modulation (IS-OFDM) system for wireless communications that suppresses interference so as not to create interference outside an in-premises perimeter.

Li discloses an orthogonal frequency division multiple access (OFDMA) system for allocating bandwidth among subscribers in a wireless network. In the OFDMA system of Li, a base station transmits and receives signals to and from a plurality of subscriber units contained within a number of cells. The information received from the subscriber includes a list of subcarriers that may be used to carry the subscriber's wireless transmission signals. The base station also receives additional information regarding each subcarrier, including traffic and frequency load information. Li at col. 3, lines 18-42.

Li discloses that the base station can use this traffic load information to allocate signal traffic among subcarriers to reduce inter-cell interference. However, as the Examiner acknowledges, Li fails to disclose or suggest not creating interference ***outside*** an in-premise perimeter. The Examiner relies on Tong to disclose this aspect of the present invention. However, Tong does not remedy this defect of Li.

In the OFDM system claimed in amended claim 1 and newly presented claim 18, the frequency bins (i.e., subcarriers) of the ultra-wide bandwidth wireless network that carry the transmitted symbols are distinguished and spread from one another into parallel data streams (as per amended claim 1), by an ***orthogonal code sequence*** resulting in a plurality of parallel spread data sub-streams separated from each other by orthogonal codes (as per amended claim 18).

In contrast, although Tong uses the term "orthogonal" to describe the manner in which the data beams are transmitted, Tong relies on time-shifting of multiple data transmission beams to avoid interference. Tong, col., 2, line 63 to col. 3, line 3; col. 4, lines 35-39; col. 5, lines 12-14; and col. 14, lines 36-56. Tong thus teaches away from the present invention , which uses orthogonal frequency division modulation to reduce or avoid interference. The combination of Li and Tong therefore does not teach or suggest all features of the invention claimed in amended claim 1 and newly presented claim 18. Withdrawal of the rejection and allowance of claims 1 and 18 over the combination of Li and Tong is respectfully requested.

Similarly, in the method for operating an IS-OFDM system claimed in amended claim 16, interference outside of an in-premises perimeter is avoided by spreading a plurality of parallel data substreams. As with claim 1 above, the time-shifting of transmissions used by Tong does not disclose or suggest the method in amended claim 16, and withdrawal of the rejection of claim 16 over the combination of Li and Tong is respectfully requested.

Claims 2-10 and 17 depend from claim 1 and are patentable for the same reasons as set forth above with respect to claim 1. Claim 11 has been cancelled, and the rejection of this claim is therefore moot.

Claims 12 and 13

The Examiner indicated that claims 12 and 13 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 12 and 13 have been appropriately amended to include all of the limitations of claims 1 and 11. Claim 11 has been cancelled. Allowance of claims 12 and 13 is respectfully requested.

Claims 14 and 15

Claims 14 and 15 were rejected on the ground of nonstatutory obviousness-type double patenting over claims 1 and 21, respectively, of U.S. Patent 6,882,619 to Gerakoulis. Gerakoulis '619 is owned by the owner of the present invention. Applicants submit herewith a Terminal Disclaimer signed by the attorney of record herein, and withdrawal of this rejection is respectfully requested.

CONCLUSION

All rejections having been addressed, none of the cited references, either alone or in combination, disclose or suggest the invention as claimed herein. Therefore, it is respectfully submitted that claims 1-10 and 12-18 are allowable over the cited prior art, and allowance is respectfully requested.

Please charge any fees required by this amendment or credit any overpayments to our Deposit Account No. 19-0733.

Respectfully submitted,

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By: Jody Bailey Reg. #56,796
Thomas H. Jackson
Reg. No. 29,808

BANNER & WITCOFF, LTD.
1001 G Street, N.W., 11th Floor
Washington, D.C. 20001-4597
(202) 824-3000